



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

08/772,259

12/23/1996

KAYOKO MASAKI

1185.1018/JD

5740

21171 7590 08/21/2008
STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

NGUYEN, THONG Q

ART UNIT

PAPER NUMBER

2872

MAIL DATE

DELIVERY MODE

08/21/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	08/772,259	MASAKI ET AL.	
	Examiner	Art Unit	
	Thong Nguyen	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-6 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-6 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____. | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) <input type="checkbox"/> Notice of Informal Patent Application
6) <input type="checkbox"/> Other: _____. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

DETAILED ACTION

Response to Amendment

1. The present Office action is made in response to the amendment filed on 5/6/08. It is noted that in the amendment, applicant has amended claims 4, 6 and 9, and canceled claims 12-17. There is not any claim being added. The pending claims are claims 4-6, and 9 are examined in this Office action. Note that claims 1-3 and 8 were canceled in the amendment of 5/17/02; claims 7 and 10-11 were canceled in the amendment of 9/12/05 and claims 18-22 were canceled in the amendment of 12/7/06.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d) (1) and MPEP § 608.01(o). Correction of the following is required.

It is noted that while the light incident onto the first slopes (M1) by an oblique manner is shown in figure 3; however, the specification has not positively provided a proper antecedent basis for the feature thereof "said first slopes being light source side slopes directed to said incidence end face of the light guide plate to receive incident light emitted from the exiting surface of said light guide plate obliquely toward said first slopes" as recited in claim 4, lines 15-17. In particular, the specification does not have any written description to support for the feature that the *light emitted from the exiting surface of the light guide plate is oblique toward the first slopes* as claimed in the newly-added material to the claim. (Examiner's emphasis).

Claim Objections

3. The objections to claims 6 and 9 as set forth in the previous Office action have been overcome by the amendments to claims as provided in the amendment of 5/6/08.

Claim Suggestion

4. The correction is suggested to claim 4.

In claim 4: on line 19, "incidence light" should be changed to --incident light--.

See the similar use of claimed language as provided on line 16 of the claim.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 4-6 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

a) Claim 4 is rejected under 35 USC 112, first paragraph because the specification, as originally filed, does not provide support for the feature related to the so-called "defined direction" as recited in the features thereof "the second slopes...light control element" (claim 4, lines 21-24) and "a surface...the light control element" (claim 4, lines 24-27).

b) The remaining claims are dependent upon the rejected base claims and thus inherit the deficiencies thereof.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 4-6 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 4 recites the limitation "the defined direction" on line 23 of the claim.

There is insufficient antecedent basis for this limitation in the claim.

b) The remaining claims are dependent upon the rejected base claims and thus inherit the deficiencies thereof.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 4-6 and 9, as best as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art described at pages 1-5 and illustrated in figures 11-13 in view of Watai (Japanese reference No. 6-250182, of record).

The optical device as provided by the prior art which is described in the present specification at pages 1-5 and illustrated in figs. 11-13 comprises 1) a light source apparatus having a lamp (7) and a reflector (8); 2) a light guide plate (2) having a light entrance surface (T) for receiving light from the light source apparatus, an exit surface and an inclined surface inclined so that the light guide

plate gradually decreases away from the light entrance surface in thickness; 3) a reflecting plate (4) disposed adjacent to the inclined surface of the light guide plate (2); and 4) a light control plate (5) having an emitting surface and an entrance surface having a prismatic configuration which entrance surface faces the exit surface of the light guide plate (2). It is also noted that the light control plate (5) comprises the following features: First, the prismatic configuration comprises a plurality of triangular-shaped projections which are extended in one common direction and repeatedly arranged in a direction perpendicular to the mentioned common direction. Second, each triangular-shaped projections of the prismatic configuration formed on the entrance surface of the light control plate comprises a first slope which is a light source side slope and the second slope which is an exiting slope being opposite to the light source side slope; Third, the emitting surface of the light control plate is spaced from the entrance surface of the light control plate as can be seen in figures 11-12; and Fourth, the entrance surface of the light control plate faces the light guide plate (2) and the light emitted from the exit surface of the light guide plate obliquely toward the first slope of the prism and then reflects from the second slope of the prism as can be seen in figure 13.

As a result of such a structure, the optical device of the prior art meets almost the structure of the device as claimed in the present application except that the feature related to the diffusing surface of the second slope of each prism. In other words, the optical device of the prior art does not disclose that the first slope of

each prism of the prismatic configuration of the light control plate is a undiffused surface, and the second slope of each prism of the prismatic configuration of the light control plate defines a diffusing surface for the purpose of generating diffused light in a substantially uniform manner and simultaneously reducing the effects of the reflecting plate.

It is also noted that the use of a light control plate having a prismatic configuration wherein the whole slant/slope surfaces of the prismatic projections or only part of the slopes of each prism constituting the prismatic configuration is made as a roughed surface which defines a diffusing surface is disclosed in the art as can be seen in the light control device disclosed by Watai. In particular, Watai discloses a light control plate and teaches the use of a light diffusing profile on a prismatic surface. The roughened pattern formed on two slopes of each prismatic projection, see section [0006]-[0012] and fig. 1 or the roughed pattern formed on only one slope of each triangular-shaped projection, see section [0013] and fig. 2, as provided by Watai will diffuse the light passing through the projection. It is also noted that the formation diffusing pattern on at least one part of the slopes of each prism as suggested by Watai is for the purpose of providing a uniform pattern of light in comparison with the use of prismatic configuration without diffusing pattern of the prior art. See sections [0002]-[0005] and figs 5-8. Regarding to the feature that the second slope of the repeated projections is a diffusible surface as claimed, first of all, it is noted that such feature is not critical to the invention as admitted by the applicant in the present specification. The

support for that conclusion is found in the present application in pages 12-13 and figs. 6-8. In other words, in the embodiment described in pages 12-13 and shown in fig. 6, the diffusible surface is formed on the first slope, not the second slope. In the embodiments as described in page 13 and shown in figs. 7-8, both the first and second slopes are diffusible slopes. In the light of the mentioned teachings, it is evidence that the formation of the diffusing pattern on the second slope is not critical to the invention which invention as understood teaches the formation of a diffusing pattern on either or both surfaces of a light control sheet. Second, it is within the level of one skilled in the art to apply the teaching provided by Watai in the light control sheet provided by the prior art by making the second slope of each prism as the slope having a roughed surface for the purpose of obtaining an device having a better quality in providing an illumination pattern to an observer. It is also noted that the combined product provided by the prior art and Watai will yield a light control plate with a prismatic configuration wherein each prism comprises an undiffused slope facing the light guide plate and a diffused slope opposite the first slope and light from the light guide plate will pass through the undiffused slope of each prism before it is reflected from the diffused slope of the prism and such operation occurs within the light control plate. In particular, in the combined product provided by the prior art and Watai et al, the light from the light guide plate incidents and passes through the undiffused slope of each prism of the light control sheet, then travels in a direction within the light control sheet,

and then reflects on the diffused surface of the mentioned prism before passing through the exit surface of the light control sheet.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the optical device having a means in the form of a prismatic configuration formed on the entrance surface of a light control plate as provided by the prior art by making at least one slope or side of each prism of the prismatic configuration as a roughed surface as suggested by Watai on the second slope of each prism for the purpose of controlling diffusing light with substantially uniform manner.

It is also noted that while Watai does not clearly state that the formation of roughed surfaces in the prismatic configuration of the light control plate reduces the effects of the reflecting member; however, one skilled in the art recognizes that the formation of diffusing pattern or making the second slope of each prism which slope causes the light effects of the light reflecting element as a roughed surface for the purpose of eliminating such effects because such use of roughed surface(s) on the second slope of each prism of the prismatic configuration as suggested by Watai will make the conventional device described in pages 1-5 and shown in figures 11-12 have a structure which is very similar to that of the device as claimed; therefore, it is expected that the combined product will yield the same result, i.e., reduction the effects of the light reflecting plate caused by a reflection of light on the reflecting plate toward the light control element and

simultaneously secure a desired angle of field of vision of the light emitted from the light control element.

Response to Arguments

11. Regarding to the rejections of claims 4-6 and 9 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, it is noted that the amendments to the claims are insufficient to overcome the rejections. Applicant's arguments as provided in the amendment of 5/6/08, page 4, have been fully considered but they are not persuasive.

Regarding to the rejection of the claim 4 under 35 USC 112, first paragraph because the claim contains subject matter related to the so-called "a (the) defined direction" which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, it is noted that the amendment to the claims are insufficient to overcome the rejections. Applicant's arguments as provided in the amendment of 5/6/08, page 4, have been fully considered but they are not persuasive.

In particular, in the amendment of 5/6/08, applicant has deleted the terms involved to the so-called "a defined direction" on line 19 of the claim; however, applicant has not deleted or amended the claim on line 23 which still contains such terms. As a result, the claim 4 is still rejected under 35 USC 112, first paragraph because the specification, as originally filed, does not provide support

for the feature related to the so-called "defined direction" as recited in the features thereof "the second slopes...light control element" (claim 4, lines 21-24).

12. Regarding to the rejection of claims 4-6 and 9 under 35 U.S.C. 103(a) as being unpatentable over the prior art described at pages 1-5 and illustrated in figures 11-13 in view of Watai, it is noted that the amendments to the claim 4 are insufficient to overcome the rejections, and applicant's arguments as provided in the amendment of 5/6/08, pages 4-13, have been fully considered but they are not persuasive.

First, with regard to applicant's arguments that the Office has not given the features related to the formation of a diffusing pattern on the second slope of the device claimed a substantially patentable weight, see amendment, page 7, the examiner respectfully disagrees and respectfully invited the applicant to review the rejection as set forth in the previous Office action, and modified in this Office action. As stated in the rejection, the Office has stated that the formation of the diffusing pattern on the second slope is not critical to the invention because the application has also disclosed a number of alternative device in which either the first slope or both slopes have diffusing patterns. The Office has also provided support for that conclusion by referring to particular sections of the present specification and the drawings to show the non-criticality of the formation of the diffusing pattern on the second slope.

Further, contrastingly to the applicant's arguments, the Office has indeed treated all features recited in the claim. Applicant is respectfully invited to review the

rejection in which the art of Watai is used to show that a diffusing surface is formed on the second slope, i.e., the exit slope opposite to the light source side. Second, regarding to the applicant's arguments that the diffusing surface is formed on one portion of the slopes of the control sheet which faces the exit surface of the light guide plate, see amendment, pages 6-8, applicant's arguments have also been not convinced. Applicant should note that the primary reference, i.e., the prior art disclosed in pages 1-5 and shown in figures 11-13 of the present specification discloses a control sheet having prismatic pattern formed on its entrance surface which surface faces the exit surface of the light guide plate. The art of Watai is used as a secondary reference in combination with the primary reference to suggest to one skilled in the art to make a portion of each projection of the prismatic pattern as a diffusing surface. Applicant should further note that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Third, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642

F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Fourth, regarding to applicant's arguments that the combined product as provided by the prior art and Watai does not disclose the features of the claimed invention, the examiner respectfully disagrees because the features recited in the claimed invention are clearly disclosed by the combined product provided by the prior art and Watai. In particular, the combined product provided by the prior art and Watai will yield a light control plate with a prismatic configuration wherein each prism comprises an undiffused slope facing the light guide plate and a diffused slope opposite the first slope and light from the light guide plate will pass through the undiffused slope of each prism before it is reflected from the diffused slope of the prism and such operation occurs within the light control plate. In other words, in the combined product provided by the prior art and Watai, the light from the light guide plate incidents and passes through the undiffused slope of each prism of the light control sheet, then travels in a direction within the light control sheet, and then reflects on the diffused surface of the mentioned prism before passing through the exit surface of the light control sheet. It is also noted that while Watai does not clearly state that the formation of roughed surfaces in the prismatic configuration of the light control plate reduces the effects of the reflecting member; however, one skilled in the art recognizes that the formation of diffusing pattern or making the second slope of each prism which slope causes the light effects of the light reflecting element as a roughed surface for the

purpose of eliminating such effects because such use of roughed surface(s) on the second slope of each prism of the prismatic configuration as suggested by Watai will make the conventional device described in pages 1-5 and shown in figures 11-12 have a structure which is very similar to that of the device as claimed; therefore, it is expected that the combined product will yield the same result, i.e., reduction the effects of the light reflecting plate caused by a reflection of light on the reflecting plate toward the light control element and simultaneously secure a desired angle of field of vision of the light emitted from the light control element.

Sixth, in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the obviousness is established by the knowledge generally available to one of ordinary skill in the art for the following reasons.

a) The arrangement of all optical elements used to constitute the light source device of the prior art, see pages 1-5 and figures 11-13 of the present application, is identical to that of the device claimed except the use of the roughed configuration on one slope of each prism of the prismatic pattern. In

other words, the use of a light control member with the prismatic surface facing the light guide of the prior art is similar to that of the device claimed.

b) The formation of roughed configuration on one slope of each prism of a prismatic pattern formed on one surface of a light control member in a surface light source device is clearly suggested to one skilled in the art by Watai will improve the uniform manner of light distribution.

c) The art of Watai and the art of the prior art are in the same field of endeavor. Thus, it would have been obvious to one skilled in the art to modify the device provided by the prior art by utilizing the teaching provided by Watai to modify the surface light source device of the prior art for the purpose of providing a more uniform in light distribution.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephane B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Thong Nguyen/

Primary Examiner, Art Unit 2872